MTH 096 – Basic Algebra

Courses with MTH 096 as a pre-requisite:

ATY 100	Astronomy
BIO 110	Principles of Biology
GET 118	Hydraulics & Pneumatics

Contributing:

L. Vietzen
J. Lindquist

Percentages

From Paralegal: (L. Vietzen)

Problem: Dad has income of $67,000, paid every 2 weeks, and must pay 12% for support, what is the payment every 2 weeks.

Note: No paralegal courses have math prerequisites.

Ratios/Conversion Factors

From Paralegal: (L. Vietzen)

Problem: She sale is closing on the 173rd day of a 365-day year, the taxes are $3650. What share is owed by seller?

Note: No paralegal courses have math prerequisites.

From NUR 214: (J. Lindquist)

Problem: The physician order reads: Run Lidocaine at 2 mg/min. The Lidocaine solution on hand contains 2 grams/250ml. How many ml/hr will you set your IV pump at to deliver the proper dose?

Solution: $\frac{2\text{ mg}}{1\text{ min}} \cdot \frac{60\text{ min}}{1\text{ hr}} \cdot \frac{1\text{ g}}{1000\text{ mg}} \cdot \frac{250\text{ ml}}{2\text{ g}} = 15\text{ ml/hr}$

Problem: Dopamine comes in a bag of 400mg in 500 ml. The order is for Dopamine to run at 6 mcg/kg/min. The patient weighs 66 kg. How many ml/hr will you set the IV pump at to deliver the proper dose.

Solution: $\frac{6\ mcg}{kg} \cdot 66\ kg = 396\ mcg$, then $\frac{396\ mcg}{1\text{ min}} \cdot \frac{60\text{ min}}{1\ hr} \cdot \frac{1\ mg}{1000\ mcg} \cdot \frac{500\ ml}{400\ mg} = 23.76\ ml/hr$

Note: No nursing courses have math prerequisites, but many nursing students take MTH 096 and sometimes MTH 098 as well to prepare for their nursing courses.
